



## Valvular Heart Disease

### THE OUTCOME OF BEATING HEART AORTIC VALVE REPLACEMENT IN PATIENTS WITH PATENT GRAFTS

#### Poster Contributions

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**Background:** AVR with previous CABG is considered as a high risk operation. Recently transcatheter aortic valve implantation (TAVI) has become a frequent alternative for this group of patients. To minimise the incidence of graft injury, AVR has been performed on a beating heart perfused by the patent grafts. We examined the outcome of this myocardial preservation strategy and compared it with cardioplegia technique in our institution.

**Methods:** A retrospective case series review was undertaken on 72 consecutive patients undergoing AVR with previous CABG and patent grafts between 1996 and 2012. There were 45 patients in cardioplegia (CP) and 27 in beating heart (BH) group. In beating heart technique following cardiopulmonary bypass, the cross-clamp was applied in a way to allow the patent grafts perfuse the heart throughout the procedure.

**Results:** Total mean age was  $74.2 \pm 7.1$  with 13 (18.0%) female. Pre-operatively all patients had severe aortic stenosis. The mean interval between the two operations was  $10.8 \pm 3.1$  years. There was no difference between CP and BH groups in pre-operative characteristics ( $p > 0.05$ ). Total mean logistic EuroSCORE was  $21.0 \pm 13.8$  with no difference between the two groups ( $p = 0.61$ ). There was more peri-operative graft injury in CP group (CP=8, BH=0,  $p = 0.04$ ), out of which 3 (37.5%) were re-grafted. Post-operatively cerebrovascular accident ( $p = 0.51$ ) and in-hospital stay ( $p = 0.49$ ) did not differ between the two groups. Frequency of a new post-operative atrial fibrillation was significantly higher in CP patients (CP=14, BH=3,  $p = 0.05$ ). Multivariate analysis revealed that increased logistic EuroSCORE ( $p = 0.009$ ) and type-2 respiratory failure ( $p = 0.03$ ), are associated with decreased long-term survival. Total in-hospital mortality was 9.7% (CP=4, BH=3,  $p = 0.42$ ). The mean follow-up was  $53.1 \pm 44.3$  months. Ten-year survival rate was 84.3% (C.I.: 81.6% - 87.1%) in CP vs. 91.9% (C.I.: 88.8% - 94.9%) in BH ( $p = 0.12$ ).

**Conclusions:** AVR in patients with patent grafts offers good short and long-term results. AVR on a beating heart is a valuable technique which significantly reduces the risk of graft injury. These results can be used as a benchmark for TAVI assessment.